



**C-17A SPECIAL OPERATIONS LOW LEVEL II**

**(SOLL II)**

**SUPPORTING THE COMBATANT COMMANDER**

GRADUATE RESEARCH PROJECT

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C-17A SPECIAL OPERATIONS LOW LEVEL II (SOLL II)  
SUPPORTING THE COMBATANT COMMANDER  
GRADUATE RESEARCH PROJECT

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## **Table of Contents**

	Page
Acknowledgments .....	iv
Table of Contents.....	v
List of Figures.....	vii
List of Tables .....	viii
Abstract.....	ix
Chapter 1 – Introduction .....	1
Background.....	1
Research Questions .....	2
Scope.....	3
Sources.....	3
Organization.....	3
Chapter 2 – Literature Review .....	5
Senior Level Guidance.....	5
National Security Strategy .....	5
Quadrennial Defense Review .....	6
National Military Strategy .....	8
Doctrine Analysis.....	9
Joint Doctrine.....	9
JV2020 .....	13
Air Force Doctrine .....	14
Defense Transportation System.....	23
United States Transportation Command.....	23
Air Mobility Command.....	23
Air Mobility Master Plan.....	24
US Army Force Module Deployment.....	25
Strategic (Inter-Theater) Airlift Capabilities .....	27
Boeing C-17A Globemaster III.....	28
Capabilities .....	28
History of Special Operations Low Level II.....	29
Chapter 3 – Methodology .....	33
Research Design.....	33
Case Study Methodology.....	34

Chapter 4 – Analysis .....	37
Task Force Hawk .....	38
Rhino LZ and the Marines .....	39
OIF- Supporting the SOF .....	41
Chapter 5 – Conclusions .....	48
Summary of Findings.....	48
Areas for Future Research .....	50
Bibliography .....	52

## **List of Figures**

	Page
Figure 1. Chain of Command and Control.....	11
Figure 2. Basic Distribution of Air Mobility Forces.....	17
Figure 3. Peacetime Control of Air Mobility Forces .....	19
Figure 4. Command Relationship for Air Mobility Forces.....	20
Figure 5. Tactical Control of Intertheater and Intratheater Air Mobility Forces Supporting JTF Operations .....	21

**List of Tables**

	Page
Table 1. Comparison of Selected Current Intertheater Airlift Assets.....	27

## **Abstract**

Shortly after the tragedy of September 11, 2001 and the start of the United States Global War on Terrorism, a dramatic change in the use of airlift forces was realized. The traditional use of strategic and tactical airlift forces was intermingled and the full capabilities of the newest USAF airlifter, the C-17A Globemaster III, were put to the test. An elite unit deep within AMC's airlift forces, the SOLL II C-17As at Charleston AFB, provided outstanding results to combatant commanders. This paper did a comparative analysis of three recent military operations relying heavily on airlift to answer the overriding research question: How well, and in what situations, has AMC satisfied the airlift requirement of High Priority, "External Users" during the USGWOT?

Starting with the history of the C-17As role in operations: Allied Force, Enduring Freedom and Iraqi Freedom, this paper described the transformation in airlift and the growing demand for its use in succeeding operations. Each operation was analyzed with respect to how the C-17A forces were employed as tactical assets but remained under strategic control of AMC.

The literature review delineated the nuances of operational control of forces during peacetime or contingency operations and showed that AMC was executing authority within the latitude granted by doctrine. The analysis did reveal, however, that missed opportunities and possible greater success by combatant commanders may have been achieved if control of forces, even time limited tactical control, was were released to the Joint Force Commander during contingency operations.

## **Chapter 1 – Introduction**

The newest weapon system in the Air Mobility Command (AMC) fleet, the Boeing C-17A, became the “ride” of choice for our troops and their equipment as we began the United States Global War on Terrorism (USGWOT). Never before in the history of our nation has a war been waged on a completely land-locked country. The unique capability of the C-17A to carry out-sized cargo directly into an austere environment or unimproved landing surface was exploited by our combatant commanders to get firepower and sustainment quickly to the front. The aircrews chosen to operate at the edge of this capability were Special Operations Low Level II (SOLL II) trained and equipped.

The purpose of this research paper is to analyze the tasking mechanism of C-17A SOLL II aircrews during an elevated participation and ever increasing role in the USGWOT.

### **Background**

Prior to the tragedy of September 11, 2001, United States forces had the unique ability to project power in support of humanitarian and other national objectives anywhere in the world at a moments notice. The operational transition from forward basing to lean/agile mobility was in full swing and the Mobility Air Forces (MAF) were at the tip of this spear. One small specialized group held deep within the MAF was the SOLL II operators at Charleston AFB, SC. These operators have assets on constant alert, or J-Alert, ready at a moments notice for Joint Chief of Staff (JCS) tasking.

While the nation and the world were still in shock over the events of 9/11, the SOLL II crews were working diligently with their DoD counterparts for response. These specially trained operators had realized the transition in warfare to the unseen enemy. Our new enemy would require a different approach from the traditional force on force conflict the DoD is shaped to conduct; covert operations deep within enemy territory to root out the evil doers and their supporters was necessary.

As our country mobilized for the USGWOT, airlift was obviously in short supply and the C-17A was in high demand. The requests started coming in for operations requiring the use of SOLL II C-17As and their crews. The J-Alert, or Joint Chiefs of Staff directed alert posture, assumed by the SOLL II aircrew at Charleston AFB is a highly refined and an agreed upon commitment for Air Mobility Command; however, a direct tasking mechanism for this capability did not exist.

## **Research Questions**

### **1. Primary Research Question**

How well, and in what situations, has AMC satisfied the airlift requirement of High Priority, “External Users” during the USGWOT?

### **2. Secondary Research Questions**

- a.** Was the process of airlift request cumbersome?
- b.** Did it change the shape of employment?
- c.** Were the airlift objectives of the Combatant Commander met?
- d.** Would “chopping” Special Operations C-17As and their crews to theater better meet the COCOM’s objectives?

- e. How would designating a fleet of Special Operations C-17As affect the “air bridge” concept of air mobility?

## **Scope**

This research focuses on providing an unbiased analysis of the current tasking mechanism for SOLL II crews when in demand by high priority external users. Recent history has shown this mechanism to be a complex non repeating process that is unique to user requests and current situations. This research does not attempt to answer the immense problem of scheduling airlift for all user requests but only the specific request of combatant commanders operating in direct action with an enemy.

## **Sources**

This paper incorporated and evaluated information obtained through civilian and military transportation organization publications, reports, and websites. Primary sources of information for this paper include, but are not limited to, the following:

- Joint and Service-specific Doctrine
- United States Transportation Command (USTRANSCOM)
- Air Mobility Command (AMC)
- Defense Technical Information Center (DTIC)

## **Organization**

Chapter 2 reviewed senior level guidance, recent studies, and the current state of strategic inter-theater lift; transition from peacetime to contingency and ultimately full

deployment in support of war with a focus on the command relationships and current doctrine.

Chapter 3 discusses the methodology used in this research. It defines the case study methodology and relates it to why it was the method selected for this analysis.

Chapter 4 gives a review and analysis of what happened in recent operations with a focus on the research questions. A discussion of three recent operations and the transformational use of airlift assets are also contained in this chapter. The fourth chapter also briefly addressed the methods used for deployment and tasking of C-17A forces.

Chapter 5 summarizes the analysis, ties the research together, and answers the research questions.

## **Chapter 2 – Literature Review**

### **Senior Level Guidance**

#### **National Security Strategy**

President George W. Bush's most recent National Security Strategy (NSS) following the tragic events of 11 September 2001 stresses, among several important assignments, the need for the United States of America to "prevent our enemies from threatening us, our allies, and our friends with weapons of mass destruction." (NSS, 2002:13) With the reduction of U.S. military forces stationed overseas over the past decade, the ability of the Department of Defense (DOD) to support our country's ability to fulfill this task is more and more reliant on inter-theater lift to transport forces from locations where they are stationed to locations where they are needed in times of crisis. According to President Bush "the presence of American forces overseas is one of the most profound symbols of the U.S. commitments to allies and friends." (NSS, 2002:29)

President Bush highlights the requirement to "transform America's national security institutions to meet the challenges and opportunities of the twenty-first century." (NSS, 2002:29) In order to meet these challenges, the U.S. must "continue to transform our military forces to ensure our ability to conduct rapid and precise operations to achieve decisive results." (NSS, 2002:16) The lift capability of our military is a key to this transformational challenge.

The transformation in our deployment methods, "fort-to-foxhole" for supplies, has also led us to conduct airlift in a new and challenging manner. No more is the day of strategic and tactical airlift. These concepts have been blurred and we are operating

across the spectrum and delivering the war-fighting capability directly into the combat zone.

To meet this challenge, the U.S. cannot solely rely on current technologies and methods, but must be continually looking for new opportunities to maintain its advantage in superior capabilities. The National Security Strategy notes that “innovation within the armed forces will rest on experimentation with new approaches to warfare, strengthening joint operations, exploiting U.S. intelligence advantages, and taking full advantage of science and technology.” (NSS, 2002:30)

## **Quadrennial Defense Review**

The Quadrennial Defense Review (QDR) Report, published in 2001 shortly after the terrorist attacks on the United States, recognizes the nature of war had changed and a new method of prosecution must be adopted. “We cannot and will not know precisely where and when America’s interests will be threatened, when America will come under attack, or when Americans might die as the result of aggression.” (QDRR, 2001: III)

Deploying forward with a capacity to swiftly defeat attacks and impose severe penalties for any aggression on an adversary is one of four goals of the new strategy for America’s defense.

The QDR also underscores the importance of mobility assets in the prosecution of military campaigns. The QDR emphasizes the need for the U.S. military to “provide sufficient mobility, including airlift, sealift, pre-positioning, basing infrastructure, alternative points of debarkation, and new logistical concepts of operations, to conduct

expeditionary operations in distant theaters against adversaries armed with weapons of mass destruction and other means to deny access to U.S. forces.” (QDRR, 2001:26)

This document also addresses the reorientation of military forces from a large global presence to a concentrated presence in Western Europe and Northeast Asia. Future deterrence will require a dependence on forward stationed and deployed combat forces and expeditionary forces, including forcible entry forces, along with rapidly employable capabilities that the U.S. military possess throughout the globe. (QDRR, 2001: 25) Some of the capabilities and forces required to meet national objectives are long-range strike aircraft and special operations forces who provide an immediately employable supplement to forward forces to achieve a deterrent effect.

Mobility transformation is identified as one of the six operational goals: Projecting and sustaining U.S. forces in distant anti-access or area-denial environments and defeating anti-access and area-denial threats. (QDRR, 2001:30)

Joint interoperability, specifically scalable and task-organized modular units at the ready disposal of the combatant commander need a means to get to the fight. These forces must be capable of conducting distributed and dispersed operations as well as forcible entry in anti-access or area-denial environments. “The United States must retain the capability to send well-armed and logistically supported forces to critical points around the globe, even in the face of enemy opposition, or to locations where the support infrastructure is lacking or has collapsed.” (QDRR, 2001: 43) This emerging environment has required mobility forces to travel farther forward into the battle area. This places equipment and lives at increased risk.

## **National Military Strategy**

The 1997 National Military Strategy (NMS) was written in support of another NSS, but many of its elements support the current NSS and QDR views. The NMS defines strategic agility as, “the timely concentration, employment, and sustainment of U.S. military power anywhere at our own initiative, at a speed and tempo that our adversaries cannot match.” (NMS, 1997) Another of the four strategic concepts, power projection, is defined as “the ability to rapidly and effectively deploy and sustain U.S. forces in and from multiple, dispersed locations.” (NMS, 1997)

The Joint Force is a main theme throughout this NMS where the military is challenged to be ready to fight as a coherent joint force, fully interoperable and seamlessly integrated. (NMS, 1997)

### ***Characteristics of a Full Spectrum Force***

US Armed Forces as a whole must be multi-mission capable; interoperable among all elements of US Services and selected foreign militaries; and able to coordinate operations with other agencies of government, and some civil institutions. (NMS, 1997)

Within the Joint Force construct, the NMS defines what is meant by “Joint”:

Each Service, including the US Coast Guard when assigned, brings its own set of capabilities and strengths to a mission. Some situations demand the unique capabilities of only one Service, but most will call for capabilities from all Services. The skillful and selective combination of Service capabilities into Joint Task Forces provides US commanders great flexibility in tailoring forces to meet national objectives given specific circumstances. As important, it presents an enemy with an overwhelming array of capabilities against which to defend. A fully joint force requires joint operational concepts, doctrine, tactics, techniques, and procedures – as well as institutional, organizational, intellectual, and system interoperability – so that all US forces and systems operate coherently at the strategic, operational, or tactical levels. Joint effectiveness does not mean that individual pieces of equipment or systems are identical, but rather that commanders are not constrained by technical or doctrinal

barriers among the components of the joint force, and that the joint force's capability is dramatically enhanced by the blending of complementary Service capabilities. (NMS, 1997)

Interoperability is also a key element of the Full Spectrum Force and within the national strategy it is stated, "Laying a solid foundation for interoperability with our alliance and potential coalition partners is fundamental to effective combined operations". (NMS, 1997)

All three of these policy documents, though drafted at different levels and by distinct senior leaders of national defense, emphasize the importance of strategic mobility assets in carrying out the military policy of the U.S.

## **Doctrine Analysis**

Doctrine is, by its very nature, explanatory and instructive. It also gives a framework to work within allowing subtle changes and agreements amongst its players. With this in mind, the researcher has taken sections from specific doctrine manuals and placed the exact wording into this literature review. No attempt has been made to interpret for the reader the meaning of this authoritative guidance.

## **Joint Doctrine**

### ***Unified Action Armed Forces (UNAAF) Joint Publication O-2, 10 July 2001***

Joint Pub O-2 discusses command relationships and assignment and transfer of forces. It describes in detail the definitions of command and how forces are directed under command authority.

### Application

- a. Doctrine and guidance established in this publication apply to the commanders of combatant commands, subunified commands, joint task forces, and subordinate components of these commands. These principles and guidance also may apply when significant forces of one Service are attached to forces of another Service or when significant forces of one Service support forces of another Service.
- b. The doctrine and guidance in this publication is authoritative; as such, it will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence for the activities of joint forces unless the Chairman of the Joint Chiefs of Staff, normally in coordination with the other members of the Joint Chiefs of Staff, has provided more current and specific guidance.



JP 3-17 describes in great detail the relationships necessary to prosecute airlift operations within a given theater. It provides fundamental principles and guidance for airlift operations across the range of military operations. “Theater airlift consists of aircraft and ground assets assigned to a combatant commander other than the Commander in Chief, USTRANSCOM, to provide common-user airlift in support of joint operations.” (3-17, 1995: vii)

The command and control flows from the Joint force commanders (JFC) to the Air Force component commanders within the Joint Air Operations Center (JAOC). Inside the JAOC reside airlift coordination cells who plan, coordinate, and manage the execution of theater airlift operations. USTC and its governing policy still have great impact on the decisions made within these cells concerning their theater and strategic assets. (3-17, 1995: viii)

The request for asset allocation within the theater is based on (1) operational necessity versus convenience, (2) availability and sustainability of alternate surface transportation modes, (3) Defense Transportation Movement priority system, and (4) the JFC's apportionment. This document shows the differentiation between planned, immediate, and emergency airlift request.

Different modes of delivery are chosen based on many factors which are decided by the JFC and component commander. Certain phases of airlift operations may be conducted by either airland or airdrop. If the decision is made for airland delivery, the JFC may desire delivery of combat troops and equipment directly into the objective area. This concept is defined as Air direct delivery which avoids the transshipment involved with the strategic airlift feeding into tactical airlift. (3-17, 1995: x)

Senior leaders within the DoD, specifically discussing airlift operations and sustainment of a rapidly moving force, have discouraged the differentiation of strategic and tactical airlift. Airlift has come to be known as the air mode of logistics regardless of its pattern of delivery.

*Joint Doctrine for the Defense Transportation System Joint Pub 4-01, 17 June 1997*

The Defense Transportation System, in compliance with DoD Regulation 4500.9-R, *Defense Transportation Regulation*, standardizes the transportation of forces to train during peace time operations in the means and manner for which they would operate during war or contingency. This critical national asset allows DoD to support the objectives of the President and Secretary of Defense (SecDef). The Commander, USTRANSCOM exercises combatant command of assigned transportation assets except for Service-unique or theater assigned assets as a single manager for DoD transportation.

Geographic combatant commanders who are assigned transportation assets to their commands will ensure these assets and their operating crews fully integrate into the DTS. The “art” versus “science” of this integration is employing national and theater assets to effectively deploy, employ, sustain, reconstitute, redeploy, and demobilize the forces assigned and attached to a combatant commander. (4-01, 1997: I-1)

## **JV2020**

Preparing America’s military for the challenges of the future is the mission of the document Joint Vision 2020 (JV2020). JV2020 builds upon and extends the conceptual template established in the previous JV2010. Transformation of the Armed Forces to meet the demands of an uncertain future is the template for this vision.

### ***The Special Operations Posture Statement 2003-2004***

This source documents the history of Special Operations within the DoD as well as founding a template for future development. A significant portion of future development will require SOF to integrate with conventional forces. “Transformation across the entire DOD (Services and Defense Agencies) augurs an increasing integration

of current conventional and special operational capabilities.” (Spec Ops Posture, 2003: 70) Both the nature of warfare and the increasing role of SOF in our national strategy mandate this. With this integration comes a certain amount of apprehension or risk. One particular type of risk is institutional. Institutional risk is defined as uncertainty or fear of management practices and controls for efficient use of the established Defense system. “SOF because of their joint nature, suffer from the collective inefficiencies of the Military Departments, such as legacy approaches for dealing with resource, manpower, and base operations support issues.” (Spec Ops Posture, 2003: 71)

## **Air Force Doctrine**

### ***Air Mobility Operations AFDD 2-6, 25 June 1999***

#### ***Centralized Control and Decentralized Execution***

Centralized control allows commanders to focus on those priorities that lead to victory while decentralized execution fosters initiative, situational responsiveness, and tactical flexibility. *Like all other forms of aerospace power, centralized control and decentralized execution of air mobility operations are essential to mission success.*

Although it is not necessary for a single global organization to centrally control all air mobility forces, all commanders should envision air mobility as a global system capable of simultaneously performing intertheater (from one theater to another) and intratheater (within a single theater) missions. Separate but integrated command structures exercise centralized control over CONUS-assigned and theater-assigned/attached air mobility forces. This arrangement ensures a proper focus for global and regional air mobility. (2-6, p.5)

The MAF satisfies mobility requirements through common procedures that bridge the functional command structures of theater and CONUS based forces. Effective support for the geographic commander in chief’s (CINC) mobility requirements demands the theater and CONUS-based forces form a global partnership. This partnership must operate as an integrated force with common planning, tasking, scheduling, and command and control (C2) systems. A critical element of this partnership is linking centralized control agencies such as the Air Mobility

Command's (AMC) Tanker/Airlift Control Center (TACC) for CONUS-based forces with the Air Mobility Operations Control Center (AMOCC) for theater forces. These MAF partners exercise centralized control to ensure both commanders are supported with responsive, capable, and seamless air mobility.

Air mobility commanders practice decentralized execution by delegating execution authority to subordinate commanders. A high degree of tasking and execution control is centralized above the wing level, with an appropriately experienced air mobility commander to direct forces and respond as a system to mobility requirements. However, tactical commanders at the wing, group, squadron, mission, and aircraft levels are vested with the appropriate authority necessary for an effective span of control while fostering initiative, situational responsiveness, and tactical flexibility. (2-6, p.6)

**The demands placed on the nation's airlift forces are numerous, global, and often unpredictable. To help ensure efficient use of all airlift assets, validated customer requests for airlift are supported in accordance with a Joint Chiefs of Staff (JCS) priority system.**

Prioritized movement requirements along with a common standard of operation allow airlift forces, regardless of the aircraft type or assigned location, to perform in a comparable and complementary fashion. Normally, movement requirements are fulfilled through regularly scheduled missions over fixed route structures with personnel/cargo capacity available to all customers. However, when a contingency occurs, airlift forces typically will surge to meet the supported CINC's validated and prioritized movement requirements.

## **PRIORITY**

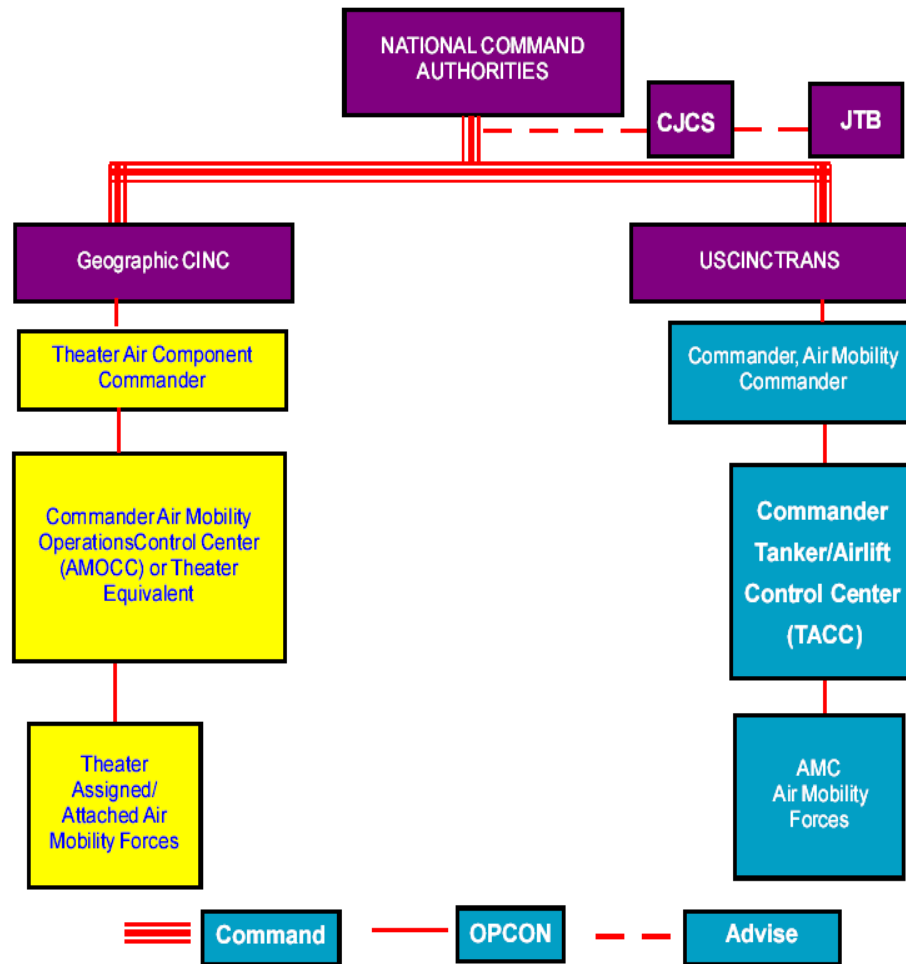
***Air mobility forces are limited and thus must be applied where they can make the greatest contribution to the most critical requirements.*** By releasing US mobility assets to the theaters for theater tasking, the Air Force enhances theater operations at the possible expense of global power projection or support to another geographic CINC. *Consequently, the NCA, with the advice of the Chairman of the Joint Chiefs of Staff (CJCS), make allocation decisions designating percentages of air mobility capabilities made available to theater commanders. NCA involvement ensures global air mobility forces are employed against the most critical national strategic objectives. Likewise, within a theater or joint operations area (JOA), the CINC/JFC must prioritize his requirements to ensure limited air mobility assets are applied in a manner that effectively fulfills his time-phased force deployment concept. Only a disciplined system of prioritization enables commanders at all levels to ensure the most urgent requirements are serviced by scarce air mobility assets.* (2-6, p.7)

## NATIONAL DIRECTION

The NCA allocate air mobility forces by prioritizing air mobility efforts to support various theaters or major operations. The NCA, with the advice of the CJCS and the Joint Transportation Board (JTB), provide this direction. The JTB may be convened by the CJCS during wartime or contingencies to ensure common-user transportation resources assigned or available to the Department of Defense (DOD) are allocated to achieve the maximum benefit in meeting DOD objectives. When convened, the JTB acts for the CJCS by communicating NCA guidance to the United States Transportation Command (USTRANSCOM) with respect to the establishment of priorities for the use of airlift, sealift, and surface transportation. As a result, USTRANSCOM reacts accordingly to support the appropriate CINCs. (2-6, p.13)

## ASSIGNMENT OF AIR MOBILITY FORCES

**The peacetime assignment of common-user air mobility assets** (as articulated in the Secretary of Defense's (SECDEF) "Forces for Unified Commands" Memorandum) **is divided between the Commander in Chief, United States Transportation Command (USCINCTRANS) and the geographic Commanders-in-Chief.** Figure 3.1 shows the basic distribution of air mobility forces and associated command and control lines.



**Figure 2. Basic Distribution of Air Mobility Forces**

## THE TRANSITION TO CONTINGENCY OPERATIONS

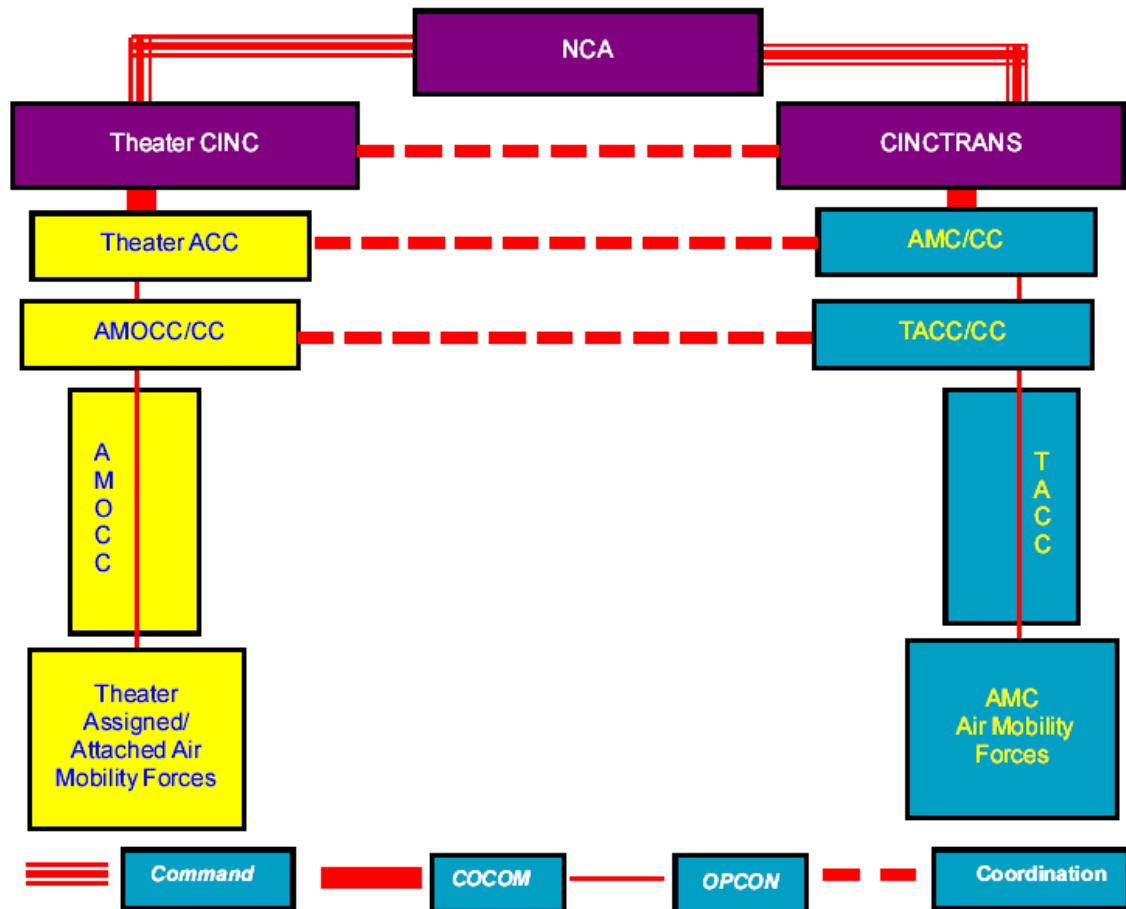
The transition from peacetime to contingency operations is a significant challenge to commanders at all levels. Rapidly developing crises leave little time for developing procedures, plans, and concepts describing the full integration of air mobility forces assigned, attached, deployed and transiting in theater.

Supporting and supported commands must develop plans for integrated air mobility operations before contingency operations begin. Ideally, these plans will produce a single concept of operations (CONOPs), which can be modified to accommodate the specific circumstances of the operation at hand. This effort requires a clear understanding of potential tasking, customer requirements, and capabilities/limitations of the air mobility system.

The COMAFFOR can ensure effective command and control over air mobility operations during a contingency by:

- Identifying the theater's present command and control capabilities.
- Identifying the theater's surge capacity without command and control augmentation.
- Identifying when the theater will need augmentation.
- Precoordinating command and control augmentation with force providers.
- Incorporating standardized MAF command and control procedures.

The key to simplifying the transition to contingency operations is developing and maintaining a seamless air mobility system during peacetime and making it part of the fabric of day-to-day operations both within the theater and between the theater and other MAF organizations. Exercising the seamless system in peacetime so that all personnel are familiar with its characteristics and procedures will simplify the integration of air mobility forces throughout the full range of military operations. This, in turn, will help establish a comprehensive and responsive command and control structure that is effective in peace and war. (2-6, p.17)



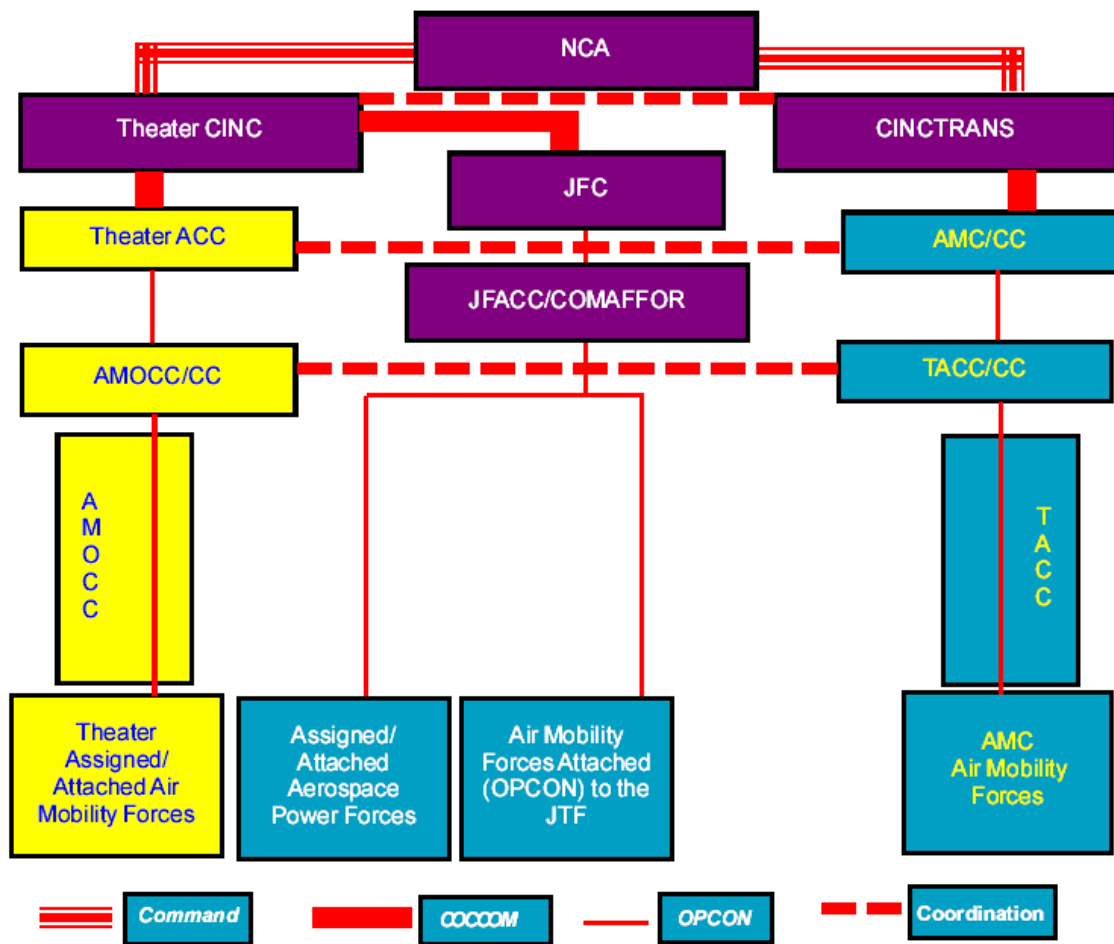
**Figure 3. Peacetime Control of Air Mobility Forces**

## **JOINING INTERTHEATER AND INTRATHEATER AIR MOBILITY**

Air mobility is a global system consisting of many diverse yet interlocking components that must integrate smoothly for the whole to function effectively. Regardless of the type of operation being conducted or customer being supported, air mobility functions most effectively and efficiently when it is employed as a homogenous network, with forces trained and equipped to common standards.

One of the MAF's most critical challenges is meshing theater-assigned/ attached mobility forces with AMC's mobility forces. To complicate matters, every theater has unique mission requirements, capabilities, and experience levels. AMC, as the lead command for air mobility, develops and maintains (in coordination with the theater air components) clear, detailed, and accountable standards to ensure efficient employment and interoperability of forces. Proper employment of air mobility forces is dependent upon establishing a standardized set of

tactics, techniques, and procedures that must be followed for the greatest effect in a resource-constrained environment. (2-6, p.18)



**Figure 4. Command Relationship for Air Mobility Forces Attached to a Joint Task Force**

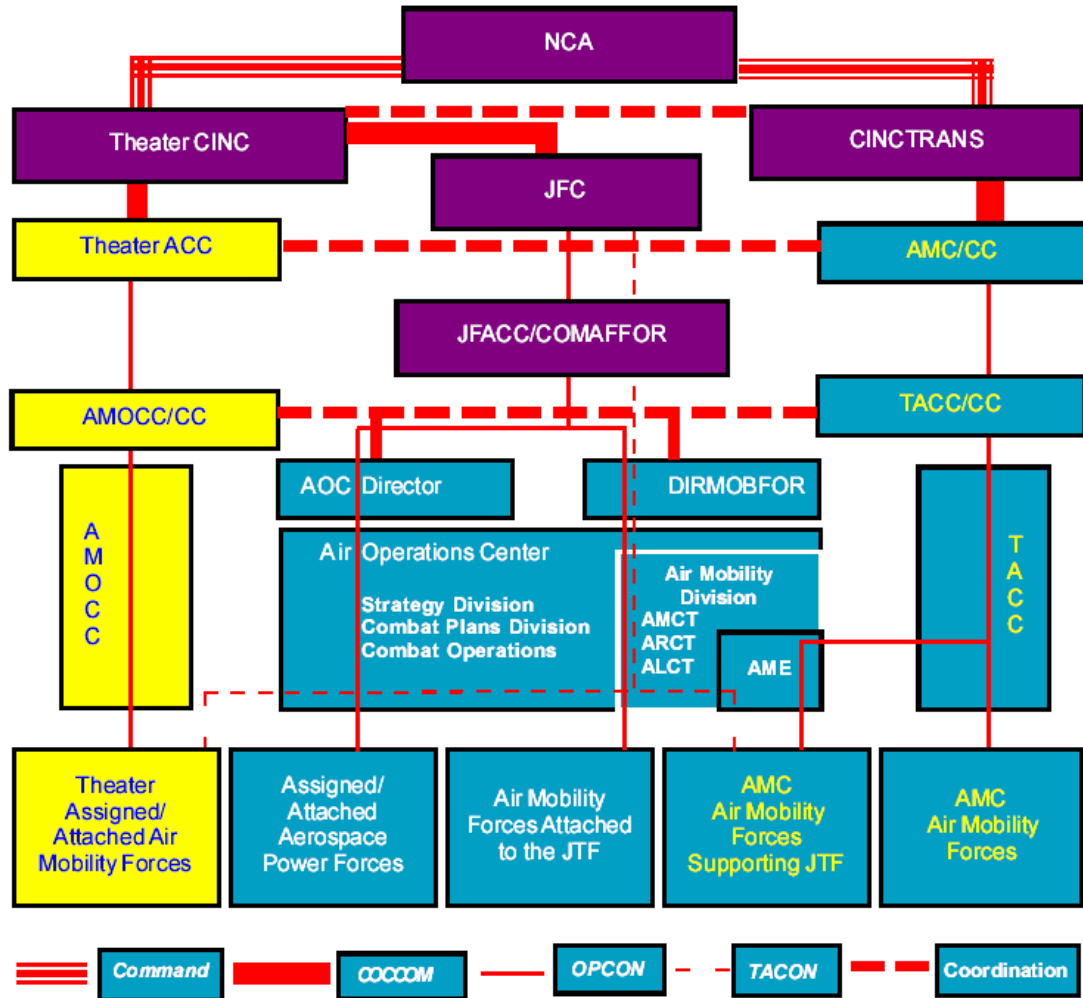
**Unity of command, one of the most fundamental principles of war, is maintained by the COMAFFOR.**

*The COMAFFOR normally exercises OPCON over all US Air Force forces provided to a joint force. Some US Air Force forces and long-range airlift assets, must maintain a global orientation and, therefore, do not normally transfer OPCON to the theaters.*

In some circumstances, a limited number of intertheater air mobility aircraft may be transferred, or made available for tasking on a sortie-by-sortie basis, to the COMAFFOR/JFACC for the JFC. In these circumstances, TACON will normally be delegated to the JFC, exercised by the COMAFFOR/JFACC, and executed through the DIRMObFOR.

(2-6, p.20)

Command relationships must allow an interlocking arrangement to manage intratheater and intertheater air mobility operations. Normally, intratheater air mobility forces will be attached to the JFC with OPCON or TACON delegated to the COMAFFOR/JFACC. (2-6, p.25)



**Figure 5. Tactical Control of Intertheater and Intratheater Air Mobility Forces Supporting JTF Operations**

### Special Operations Support

Specified airlift forces provide unique airland and airdrop support to special operations for joint/multinational training, contingencies, operations other than war, and other missions as directed by the NCA. Since there are a limited number of airlift assets dedicated to this mission, the principle of economy of force is particularly applicable.

When performing special operations missions, highly trained airlift crews normally act as an integral member of a larger joint package. Because these airlift missions routinely operate under adverse conditions in a hostile environment, extensive planning, coordination, and training are required to minimize risk. Airlift used in a special operations role provides commanders the capability to achieve specific campaign objectives, which may not be attainable through more conventional airlift practices. (2-6, p.45)

***Special Operations AFDD 2-7, 17 July 2001***

**AFSOF are organized to rapidly assemble and employ tailored forces** capable of functioning both synergistically with each other and complementarily with other aerospace and surface forces in unified efforts. Whether operating within the context of the theater SOF efforts or in conjunction with the JFACC's joint air operations plan, AFSOF organization provides versatility and flexibility for the precise application of aerospace power. (2-7, p.27)

During early campaign planning and prior to the deployment of forces, the JFACC should identify and inform the JFC of the SO forces required to execute JFACC missions. These forces can then be identified by the JFC in his request for forces to the NCA and be attached or put in a supporting role as appropriate. During campaign planning and execution the JFACC presents apportionment recommendations to the JFC. These recommendations may include AFSOF not under the direct control of the JFACC but required to execute the JFACC's mission. (2-7, p.28)

Whether operating under control of the COMAFFOR/JFACC or the JFSOCC, SO missions are integrated into other air activities supporting the theater campaign. Integration is crucial because the JFACC and the JFSOCC normally share common operational areas, and their assets routinely operate in the deep battlespace. SOF aviation and surface assets are integrated closely in all joint air operations, from planning through execution. To ensure this, the JFSOCC provides the JFACC a SOLE to coordinate, deconflict, and integrate SOF operations, strategy, and plans with JFACC forces. (2-7, p.28)

## **Defense Transportation System**

### **United States Transportation Command**

#### **PLANNING AND EXECUTION**

No matter how well maintained and trained our forces are, without adequate support and seamless processes, they will not contribute their full value to the national strategy. Our goal is to improve the timeliness, effectiveness, and security of our peacetime and wartime capabilities. We will achieve this through the application of thoroughly-planned, well executed and seamless processes which support strategic mobility forces across the entire spectrum of conflict. We will continue efforts to streamline and achieve efficiencies through the elimination or consolidation of Defense Transportation System-related processes at the lowest appropriate level of policy and execution.

To this end, contracting, procurement of services, and acquisition processes must be improved to enable more expeditious and coordinated execution. Innovative and cost-effective solutions may be borrowed or adapted from commercial industry. We will improve and sustain our processes for gathering intelligence and protecting our forces, equipment, and systems against threats that are becoming increasingly diverse and nontraditional. We must also continue to enhance our ability to command and control our forces using integrated approaches and providing common operating pictures to the lowest practical levels. Deployment and distribution systems and supporting information technologies must be upgraded and improved to make the processes more user-friendly, responsive, and seamless. End-to-end solutions must be pursued wherever feasible and appropriate. Finally, we must continuously strive for evolutionary and revolutionary approaches to improve processes and provide technological solutions to problems posed by future environments. (USTC, p.12)

### **Air Mobility Command**

“Air Mobility Command (AMC) is a United States Air Force (USAF) major command headquartered at Scott Air Force Base, Illinois. As the Air Force component command of USTRANSCOM, AMC provides common-user and exclusive-use airlift, air refueling, and aeromedical evacuation services for deploying, employing, sustaining, and redeploying U.S. forces wherever they are needed worldwide. Additionally, AMC is the

worldwide aerial port manager and, where designated, operator of common-user aerial ports of embarkation (APOEs) and/or aerial ports of debarkation (APODs).” (USTCH 24-2, 2000:2)

## **Air Mobility Master Plan**

The 2004 Air Mobility Master Plan is a strategic plan supporting the new and fashionable effects-based operations (EBO). It is founded within the guidance set forth by senior leaders in our National Security Objectives, National Military Strategy, and guidance from the 2001 QDR. This Mobility Air Forces (MAF) planning process is guided by Doctrine and ensures the MAF provides capabilities called upon by the combatant commanders utilizing Air Force Concepts of Operations (CONOPS). (AMMP, 2003)

This document is published in three volumes: Future Operating Environment & Impact on Mobility Air Forces, Air Mobility Capability Roadmaps, and Air Mobility Capabilities Investment Strategy (published separately as a classified document). The first volume attempts to recognize the shift in warfare that the MAF has experienced immediately prior to and since the start of the USGWOT. “Mobility forces have been fully engaged in the War on Terror and played critical roles in the successful outcomes in Afghanistan and Iraq.” (AMMP, 2003: 1) The future environment that MAF assets will be required to operate in and exploit is unknown but certain threats will remain.

“We can anticipate that failed states, terrorist organizations, or coalitions hostile to the US will attempt to exploit widely available technologies to develop dangerous capabilities for use against us...We should expect asymmetrical attacks; mobility

infrastructure, to include major airfields, aerial port facilities, and launch and range facilities will be a tempting target.” (AMMP, 2003:1) These asymmetric threats are the challenge that must be faced, and in order to address this, the MAF must transition its training focus. The predictions made by senior MAF leaders require greater use of air refueling, extended mission ranges, and direct delivery capabilities. The direct delivery portion is where the C-17A community has and will continue to impress users and adversaries alike.

Volume II is a series of roadmaps for both airlift and air refueling missions and each MAF weapon system. Following the success of recent operations and the endless request for airlift coupled with a decreasing total number of airlift aircraft available, AMC has decided a minimum of 222 C-17As need to be procured. Complementing this capability for outsize airlift, AMC has stood by the decision to enhance the C-5 with the Avionics Modernization Program (AMP). A force enabling enhancement that is currently in progress is the installation of Large Aircraft Infrared Countermeasures (LAIRCM) to help aircraft defeat emerging threat weapons.

This second volume contains roadmaps for fourteen support processes. These processes detail plans for improving support to the warfighter with internal and external business process improvement.

## **US Army Force Module Deployment**

“Unit of Action” (UA) is a term describing the new brigade structure in the US Army. “How can fewer tanks, fewer Bradleys and fewer howitzers add up to a more lethal unit?” (Sheftick, 2004) The 2<sup>nd</sup> UA of the 3<sup>rd</sup> Infantry Division restructured its

force to include only two maneuver battalions instead of three. Now the unit is composed of one infantry battalion and one armor battalion. Although the new structure loses a battalion of armor, 44 M-1 Abrams tanks, it gains a cavalry unit. This unit will be transformed into the new reconnaissance, surveillance and target acquisition squadron which contains three times the firepower of the old reconnaissance troop. (Sheftick, 2004)

Using the UA force structuring, the net airlift requirement should be lower. The simple reduction of the armor battalion is an airlift requirement reduction of at least 44 C-17As due to the 1:1 ratio required for lift of this massive system. Simple computations using a pessimistic reliability rate of 85% yields a lift requirement of 52 C-17As. The goal in the reorganization of these combat units is to align the force structure with the current use in the field and make units who normally fight together assigned together.

This force structure, although still in its infancy, will align with the goal of all logisticians and “JOPESters” within the DTS to reduce requirement for expensive and limited airlift. The exact lift savings has not been determined and may be fluid based on our new effects based fighting system.

Effects based fighting is similar to Request for Forces (RFF) planning where only the required forces are sent to the battlefield. The senior leaders determine the operational objectives and the combatant commander will request the forces to accomplish those objectives based on effects or capabilities instead of requesting particular units or weapon systems. The RFF method of deployment was used throughout OIF as opposed to the traditional Time Phased Force Deployment Document

(TPFDD) method where an Operational Plan (OPLAN) is pulled from the shelf and used “as is” including the lift requirement.

## Strategic (Inter-Theater) Airlift Capabilities

AMC’s organic fleet of inter-theater airlift assets consists of three main airlift platforms (the C-5, C-17 and C-141) and the dual role KC-10, which can be used as an airlift or refueling platform. The KC-135 is most often used as an air refueling platform, but can perform a limited airlift role when needed. The C-17, as the newest airlift platform in the fleet, was procured to replace the aging C-141 fleet which is slated to retire in fiscal year (FY) 2006. (USTC Briefing, 2002) The success of the C-17 in many deployments since its introduction has made it the core airlifter of the DOD. Even with this success and the intent of purchasing 180 C-17s, USTRANSCOM Commander General John Handy has expressed the need to procure a minimum of 222 C-17s to meet the MRS 05 requirements. (Book, 2002) How many would be required to meet current demand? The variable here is how are we going to measure the lift requirement based on the Army’s UA force restructuring and their deployments?

**Table 1. Comparison of Selected Current Intertheater Airlift Assets**

Aircraft	Length (ft)	Width (ft)	Pallet Positions	Passengers	Cargo Capacity (S/T) (1)
C-5 Galaxy	247.8	222.7	36	73	89
C-17 Globemaster III	173.92	169.75	18	102	65
C-141 Starlifter	168.4	160	13	153	30
KC-10 Extender	181.6	165.3	25	75	60
KC-135 Stratotanker	136.25	130.85	6	53	18
Boeing 747	231.83	195.67	44	335	100
Note 1 – Military aircraft calculated for a 3200 nautical mile (NM) leg and civilian aircraft (CRAF) calculated for a 3500 NM leg.					

(AFP 10-1403, 1998)

The major organic AMC inter-theater airlift platforms and one CRAF platform are listed in Table 1 along with selected data for comparison. Cargo capacity is stated in terms of a short ton (S/T or STON) which is equal to 2000 pounds.

### **Boeing C-17A Globemaster III**

#### **Capabilities**

Quite simply it was built to carry outsize combat cargo and equipment directly into austere airfields, by either airland or airdrop. The C-17A is capable of rapid strategic delivery of troops and all types of cargo to main operating bases or directly to forward bases in the deployment area. It is designed to airdrop 102 paratroopers and equipment. A significant feature of the C-17A is its externally blown flaps; this configuration combined with direct lift control spoilers and high impact landing gear allow it to operate at high gross weights and still use small austere airfields. This propulsive lift system, which uses engine exhaust to augment lift generation by directing exhaust onto large flaps extended into the exhaust stream, allows for steep approach angles at remarkably slow landing speeds (Global, 2003).

Another great feature is the thrust reversers (TRs) which thrust forward and upward enabling backup maneuvering and minimizing the disturbance of debris or dust on the ground. The TRs allow incredible flexibility on a ramp with limited space. Combining the steep approach with excellent ground maneuvering allows the C-17A to take off and land on runways as short as 3,000 feet and as narrow as 90 feet and turn around on such a surface using backing and a star turn.

The business end of this aircraft was designed with the customer in mind. A single loadmaster, part of the minimum crew of 3, can load cargo through the large aft door that accommodates military vehicles and palletized cargo. The C-17A can carry virtually all of the Army's air-transportable, outsized combat equipment. The maximum payload capacity of the C-17A is 170,900 pounds, and its maximum takeoff gross weight is 585,000 pounds (USAFPA, 2003).

## **History of Special Operations Low Level II**

The SOLL II mission was created in 1979 to fulfill requirements for a single vital mission, Desert One. Nine crews were trained in three basic tactics: night vision goggle (NVG) low level flight, NVG landing, and rapid offload. In 1980, MAC was directed to keep the capability indefinitely. This high-capability mission was established at Charleston AFB in 1982, and the Special Operations Division was established in August of that year. SOLL II quickly evolved into a much more complicated mission, as more than 20 special operations capabilities were added between 1982-1988.

In 1983, due to the intensity of world events and user requirements, the 437<sup>th</sup> Airlift Wing (437 AW) established a standby force known as "Quasi-Bravo alert." Two crews were on alert status, which required launch three hours after notification. This alert force was used three times for real-world contingencies. Obviously, world events were driving a formal alert force. After a painful two-year staffing process, the first formal J-Alert stood up on 5 January 1987. Three crews were agreed upon: 1 SOLL II, 1 Boat Drop, and 1 Airland crew. Boat drop was created in place of a second SOLL II crew and is a specially trained aircrew capable of employing forces utilizing water craft airdropped

from the C-17A. The airland crew is an aircrew enhanced with an additional aircraft commander making them capable of repeated aerial refueling to prolong their flight time and distance. The C-141B Special Operations scenario involved a long-range, 2-3 air refueling, and clandestine insertion of cargo/troops in a blacked-out environment. It provided a rapid response to NCA/JCS directives and global projection of Special Operations forces in crisis situations.

Between 1982 and 1993, the aircrews were divided among three squadrons, with 437th Airlift Wing Special Operations Division managing the alert force, exercise and contingency mission planning, and C2 responsibilities. On 1 Oct 93, the 76<sup>th</sup> Airlift Squadron at Charleston was designated as the 16<sup>th</sup> Airlift Squadron, the first squadron in the Air Force established solely to conduct SOLL II missions in the C-141B Starlifter. During this decade of SOLL II evolution, the 437 AW used its SOLL II capability to the maximum extent in every major contingency. In addition to various classified missions over the last two decades, the SOLL II force has been a major contributor in many world crises. For example, in December 1989, all nine integral C-141 SOLL II crews led the airdrop assault for Operation JUST CAUSE, directly resulting in the fall of the Noriega regime. The significance of this mission should never be forgotten. This was the first time a successful major assault was conducted by employing forces that took advantage of “owning the night”; utilizing night vision goggles (NVGs) to provide mass force in minimum time. Many of the tactics and procedures established by our elite crews have now been adopted by other organizations in the US military. Also, in 1994, planners attached to the Special Operations Division provided direct input to the Haiti invasion

plans for Operation UPHOLD DEMOCRACY. Once again, our SOLL II crews were poised for launch to lead the paratroop drop if needed.

On the home front, in June 1986, Charleston DOS (Special Operation Division) began a seven step roadmap concept development that paved the way for landing at unlit airfields with no arrival party (CCT), no beacons, and no IR runway lights. This led to the “first-on-the-ground”, CONUS-to-objective capability. In 1988, the Air Force budgeted \$41 million to convert 13 C-141B aircraft to support this mission. These Special Operations Force Improvement (SOFI) aircraft, delivered from 1992-1998, gave the C-141B that desired “first-in” capability to land. The 437 AW Special Ops Division personnel worked exhaustively on modification design and implementation to bring this program to fruition. During this time, the 16<sup>th</sup> Airlift Squadron garnered AMC’s #1 safety record of 913,000 accident-free flying hours performing intricate special operations missions.

The Special Operations Division has never relied solely on the pilots, engineers and loads for success. A major contributing factor in its success has been the Maintenance Special Operations (MASOP) cell and communications personnel in particular. The MASOP program began with 32 motivated professionals, and has grown to a standing force of 36 highly motivated maintenance warriors. These individuals sit alert with the crew, and are prepared to deploy with them at all times. Over the years, their extraordinary efforts resulted in unsurpassed reliability rates for the aging C-141B fleet of aircraft which is over 30 years old, and astounding equipment and reliability upgrades in the C-17. The communications specialists have provided an indispensable capability to maintain C2 connectivity in our aircraft for all exercises and contingencies

demanding a SOLL II force. The Special Ops Division now has 10 communication specialists, and each of them is crucial to our mission.

In the mid-nineties, the SOLL II force embarked on its greatest organizational challenge to date. Taking into consideration the aging C-141 fleet, AMC began the process of transitioning the SOLL II capability to the C-17. In the interim, the C-141 SOLL II mission and alert requirement was transferred to McGuire AFB, NJ. From 1997-2002, the 305 AMW proudly held all or a portion of the SOLL II requirement while the C-17 was being brought on line.

AMC Programming Plan (PPlan) 98-10 identified the requirements and actions necessary to transfer the Special Operations strategic airlift mission, which includes Special Operations Low Level (SOLL) II, Boat Drop, and JCS-directed alert from the C-141 aircraft at McGuire AFB, NJ to the C-17 aircraft at Charleston AFB, SC. Per the PPlan, the 437 AW started with 1 fully qualified C-17 SOLL II crew in 1 Apr 00 and added a crew per quarter until it reached 9 crews in May 2002, three months ahead of schedule. This transition also highlighted equipment shortfalls on the C-17, which were discovered in the seven-phase C-17 Follow-On Operational Test and Evaluation (FOT&E) flying phase, which was completed in October 1998. During this challenging transition, the Special Operations Division of the 437<sup>th</sup> AW (437 OGS) enabled the wing to meet and exceed every goal and timeline set forth by AMC and has built the SOLL II contingent into an even more powerful force than it was when the C-141 so ably held the reins. Effective June 2002, all J-Alert site and Special Operations mission responsibility transferred to Charleston AFB. Based on the information presented in this literature review, the next chapter presents the methodology.

## Chapter 3 – Methodology

### Research Design

The research in this paper was designed to address the transportation allocation of Special Operations C-17As and their aircrew for use by “High Priority” external users. “High Priority” is defined, in this case, as an emergency request used by a Combatant Commander to achieve a desired objective within an ongoing or upcoming operation. This was not to be confused with the traditional definition of “emergency” airlift because it was not time critical in the tasking but critical to the operation in achieving the airlift.

To answer the research questions, a comparison of three recent operations involving C-17As were examined. The first operation did not specifically use Special Operations aircrews but was revolutionary in its use of a new asset, the C-17A, and its emerging capabilities. The second and third operations used SOLL II aircrew as a critical part of the commander’s intent for execution. The second operation (OEF) being closer to what could be called “in extremist” action because it did not involve deliberate planning. It entailed the emergency response of our nation to the attacks of September 11, 2001. The last operation took place during OIF and was most definitely deliberately planned and executed.

The fundamental question and reason for this case study was: How well, and in what situations has AMC satisfied the airlift requirement of “High Priority, External Users” during the USGWOT? Obviously AMC has made every effort to support the Combatant Commander in any way it can, and this support has been highly successful. Answering the investigative questions was required for effective analysis of this overall

question. The literature review provided the doctrinal analysis and needed information outlining the prescribed method for assigning airlift. Analyzing the operations within the framework laid by the literature review revealed the unique tasking that occurred for each operation. The research was not intended to discredit the success enjoyed in any operation but rather to analyze how those successes occurred.

## **Case Study Methodology**

The research required to answer the investigative questions was best defined by the case study method, specifically the multiple-case study method. In this study three recent operations are compared to gain understanding, give insight and answer the investigative questions asked by the researcher. Case study analysis is one of many ways of accomplishing social science research. Some of these methods include: experiments, surveys, histories, and analysis of archival information. Each of these strategies has strengths and weaknesses depending on the circumstances being analyzed and the design the researcher undertakes.

When “how” or “why” questions are being asked, case studies, histories and experiments are possible strategies. The case study is different from a historian’s view in that it uses direct observation of events and possibly interviews of persons involved in these events. Case studies are the preferred method for examining contemporary events where control over relevant behaviors cannot be manipulated. (Yin, 2003)

This research paper relies on documented policy, direction, and direct observations of historical events to explore the research questions posed and answer them. The researcher was able to directly observe events; however, he was unable to

control behavior of participants making the case study the best method for this research.

The “how” and “why” questions asked by this research are:

1. Was the process of airlift request cumbersome?
2. Did it change the shape of employment?
3. Were the airlift objectives of the Combatant Commander met?

These questions were intended to evaluate the tasking of SOLL II C-17As and their aircrews for inter-theater airlift of “high” priority users and determine if they were accomplished. This comparative analysis study was used instead of the single-case design to emphasize the transition in use of MAF assets for the future.

Once it was established to pursue a multiple case study methodology the design of the research or the road map for proceeding was created. This road map of sorts is required to link the initial questions or reasons for conducting the research to the conclusions. Research design consists of five components: research questions, propositions, unit(s) of analysis, logic linking data to propositions, and the criteria for interpreting the findings. (Yin, 2003: 21)

The questions as listed above had associated propositions to provide research guidance. They direct attention to what should be examined within the scope of the study. The unit(s) of analysis are defined by what the “case” is; an accurate measurement that is only possible by clearly defining the research questions. The case study and units of analysis should either be similar to those previously studied or should involve clear, operationally defined ways. The fourth and fifth components, linking data to propositions and interpreting findings, are used to compare an established criterion to a result in order to answer the original question. (Yin, 2003: 26)

Qualitative analysis was used extensively in this case study. The results of “how” the commanders reported their success was the unit of analysis for this measure. Reports by subject matter experts and “road show” presentations were obtained which reported success to the forces at home. The results of the operations in question were compared with how the implementation of these forces is guided by the doctrinal review.

Because the research design called for a multiple case study, a comparative analysis was used. Pattern matching and linking of results with common themes were used for determining success. Investigative question 2 required a rigorous analysis using subject matter expert reports and after action reports to glean the potential for lost mission due to delays in approval.

In the next chapter, this methodology is applied to three separate cases in order to analyze the operations with respect to the research questions posited. The questions and answers are given after a brief summary of the three recent military operations: Allied Force, Enduring Freedom, and Iraqi Freedom.

## **Chapter 4 – Analysis**

This chapter reviews three operations where the C-17A played a significant role in the air mobility portion of force employment. The first operation, supporting Task Force Hawk, is used as a base case from which the transition in airlift operations accomplished by the C-17A set the stage for follow on operations utilizing the emerging capabilities of this airlifter. The second operation, supporting the U.S. Marines CTF 58, was used to answer the first and third investigative questions: (1) Was the process of airlift request cumbersome? and (3) Were the airlift objectives of the Combatant Commander met? The third operation, supporting TF 20, demonstrates the expeditionary use of a mature SOLL II program and the nature of the capability those forces bring to the table. This capstone operation answers the second investigative question: Did it change the shape of employment? This operation also answers the multiple case analysis question: How well, and in what situations, has AMC satisfied the airlift requirement of high priority, “External Users” during the USGWOT?

Future research areas are highlighted during the analysis of the most recent operation during OIF and give rise to concern for future employment. The last two research questions: (4) would “Chopping” Special Operations C-17As and their aircrews to the theater commander, meet the Combatant Commander’s objectives? and (5) how would designating a fleet of Special Operation C-17As, possibly under Air Force Special Operations Command, affect the “air bridge” concept of air mobility? are beyond the scope of this paper and are noted as future research topics.

The following operations are recent examples of the transformation in airlift. No longer is the line between “strategic” and “tactical” airlift operations so defined. The blurring of these two traditional terms is being accomplished throughout AMC’s airlift system, but it has been exemplified by the C-17A and its ever expanding capabilities.

## **Task Force Hawk**

Operation Allied Force (OAF), NATO’s response to President Milosevic’s ethnic cleansing campaign, started on 24 March 1999. Milosevic was trying to depopulate and destroy the Albanian majority in Kosovo. Instead of Milosevic withdrawing his forces after the first two to four days of aerial bombardment, he accelerated his campaign. Knowing that NATO had a long road ahead, the requests for additional forces started rolling in. On 3 April 1999, President Clinton authorized the deployment of two battalions of Apache attack helicopters to support the air operations (Cohen, 1999).

Task Force Hawk received its deployment order and prepared to move. The helicopters were self deployable because they were stationed in Germany but the support forces would need airlift. This support package was very robust and included: Multiple Launch Rocket System artillery and a support unit, force protection unit including Bradley fighting vehicles and military police, a signal unit, intelligence unit, aviation maintenance, and other support units (Cohen, 1999).

This operation was the perfect stage for America’s new, and somewhat contested, airlifter to prove itself. The location approved for operations by the Albanian government was Rinas Airfield, near Tirana. The first C-17A departed Ramstein AB, Germany on 8 April 1999. The capabilities of the C-17A allowed it to land and

maneuver on this small airport with extremely limited ramp space. There was only room for two aircraft to be on the ground at the same time. The operation was further challenged by limited infrastructure available to facilitate efficient offload and distribution of supplies now being brought en masse.

This was the first use of the C-17A in actual combat conditions within arms reach of the enemy. The airlifter and its crews successfully brought much needed supplies to the war fighter at a remarkable reliability rate of over 96% (Huxsoll, 1999).

From this operation the position Director of Mobility Forces (DIRMOBFOR) was born. This position was generated to place an airlift Wing Commander or equivalent within the battle staff of the Joint Forces Commander to be the liaison to the JFACC/COMAFFOR; thus highlighting the need and importance of airlift within the JFC scope of operations. “The DIRMOBFOR is the COMAFFOR’s or JFACC’s designated coordinating authority for air mobility with all commands and agencies both internal and external to a joint force. (AFDD 2-6)”

## **Rhino LZ and the Marines**

As our country began its retaliation effort for the tragedy of September 11, 2001, and our forces were being deployed forward by all means available, a unique opportunity arose for the C-17A and its Special Operations, SOLL II, aircrews. U.S. Central Command (CENTCOM) developed plans for sustained overt and covert military operations against the Taliban and Al Qaida terrorist organizations in Afghanistan. Offensive military operations commenced on 7 October 2001 with intense air and missile strikes. U.S. SOF assisted Opposition Groups (OG) and provided target designation for

Coalition air strikes. TF SWORD (Task Force Sword- U.S. SOF) conducted the first American ground offensive action of the war on 19 October 2001, raiding Mullah Omar's Kandahar residence and the remote desert airstrip that became Forward Operating Base (FOB) Rhino. Air and Special Forces operations successfully shaped the battlefield, but Taliban forces continued to control a majority of Afghanistan, key leaders within Al Qaida remained untouched, and by late October 2001, it was apparent that a sustained ground presence was necessary to destroy the Al Qaida network and overthrow the Taliban.

Upon giving the order to establish an FOB in southern Afghanistan, General Tommy Franks, USCENTCOM Commander, was ordering the Marines Combined Task Force 58 (CTF 58) to move ashore under the command of BGEN James Mattis. On 25 November 2001, six Marine CH-53E helicopters landed at Rhino LZ (landing zone) and started a battlefield handover from TF Sword. Because intra-theater lift was critical to the rapid buildup of combat power and logistics sustainment during the operation, CTF 58 requested C-17 support on 17 November 2001. At that time, Transportation Command (CINCTRANS) had serious reservations about committing C-17s into southern Afghanistan based, in part, on the perceived Surface to Air Missile (SAM) threat. C-17s were approved for nighttime operations at FOB Rhino after a threat assessment was completed and patrols and observation posts were established in the landing and take-off cones (CTF 58, 2002).

The most important aspect of the environment at FOB Rhino was the fact that it was the definition of a small austere airfield. It was a semi-prepared surface, meaning it was not paved but hard-packed sand, grated and marked with large rocks on the

perimeter. In simple terms- it was a “dirt” strip determined to be suitable for landing a large aircraft on.

The first wave of C-17s landed on 28 November 2001 transporting Seabees, to maintain the landing surface as the employment and re-supply chain was started. Over the next 8 days, the C-17s delivered an incredible amount of war fighting capability: 64 sorties, 1450 short tons of cargo, and 481 passengers.

A huge milestone was passed using SOLL II crews for this employment. It marked the first use of Night Vision Goggles (NVGs) during combat in the C-17A. As a result of this success, NVG training became the norm for all crews, not just specialized tactical crews.

## **OIF- Supporting the SOF**

***Disclaimer-** Due to the classification of the user’s operations, detailed descriptions of units and tactics are not able to be discussed in this forum.*

The great success of the Rhino LZ insertion by the C-17A SOLL II force created a strong desire within the SOF community to utilize this capability for the Coalition’s planned invasion of Iraq. Early in the planning phase for OIF, SOF planners invited C-17A SOLL II aircrews to collaborate on a plan for employment of their forces in the enemy’s formidable defensive environment. Special Forces, like most combat units in the Department of Defense (DoD), have become increasingly aware of their potential adversaries and have developed equipment that is increasing in size and weight to counter the threat. The Spec Ops user wanted to utilize the outsized cargo capacity of the C-17A to insert their personnel and equipment deep within enemy held territory.

The deployed SOLL II crews, 781<sup>st</sup> Expeditionary Airlift Squadron (EAS), prepared to execute all aspects of their unique capabilities, from the new personnel airdrop to establishing Forward Area Refueling Points (FARP). FARP is a SOLL II specific procedure involving the refueling between two engine running aircraft. A mission utilizing this capability was the landing of a C-17A on a strip of road in southwestern Iraq. The aircrew landed on the road, downloaded the user and was prepared to establish a FARP upon user request. This strip later became a SOF staging base for missions in that area.

The most notable mission in the early days of the war was the assault on H-1 Airfield in western Iraq. The C-17A airdropped Heavy Equipment (HE) platforms totaling 194,000 pounds as well as the personnel to operate the equipment and provide security at the field. This mission provided Coalition forces with an immediate western front. The staging base at H-1 provided SOF the ability to strike enemy targets in western Iraq. After the initial assault, airland missions began bringing in outsized cargo and setting up FARP operations transferring fuel from the C-17A into fuel bladders for use by helicopters and tanks conducting combat operations in the area (Snelson, 2003).

Another critical mission accomplished, by the unique C-17A capability, was the transport of 10 US Army, M1A1 Abrams tanks from a field in southern Iraq to H-1. For the Army to do this overland would require 10 days travel while fighting their way through the battle area, it would also require the added support from theater assets to fuel and re-supply along the way. The SOLL II crews moved these combat ready tanks in three days.

As the Iraqi Regime was falling and the ground forces overran Baghdad, the C-17s were tasked with moving the Combined Forces Land Component Commander's Early Entry Command Post forward to Baghdad International Airport (BIAP). The first night into BIAP, MC-130s brought in SOF personnel and vehicles, setting up a reception team for follow on operations. On night two, the C-17s delivered more SOF equipment and outsized vehicles, landing on the taxiway between the terminal and the unusable runway (Snelson, 2003).

### **Investigative Question 1 Results**

Was the process of airlift request cumbersome? The proposition for this investigative question being: The normal airlift tasking methods, either special assignment airlift or channel/routine, was used to satisfy airlift requirements for the external users of the lift during these operations.

The literature review has shown through doctrinal analysis the makeup of the tasking mechanism for airlift during contingency operations. The mechanism allows for intra theater airlift forces under the OPCON of the JFC to be tasked by the JFACC or COMAFFOR depending on the leadership structure. The difficulty encountered with the SOLL II operations was a direct result of being tactical/intertheater airlift but not being under the OPCON of the JFC. These assets were OPCON to AMC and monitored by AMC's execution arm, the TACC. The users, specifically the Marines in the case of CTF 58, were the requesting agency who thought missions could be assigned by working directly with the SOLL II commander at Thumrait AB, Oman. Fortunately, this commander and the home station leadership had placed a SOLL II planner on staff at the

Combined Air Operations Center (CAOC) to manage and interpret this tasking to the Air Mobility Division (AMD).

During OIF, because the SOLL II portion had been deliberately planned, AMC released a well defined force to support TF 20 with Conditional Tactical Control (CONTACON). The airlift assets used for this mission were removed from planning the TPFDD movement for the rest of the force. This CONTACON allowed TF 20 to use these assets for a specific mission or set of missions as briefed and approved by the AMC/CC. A constraint to this type of release became evident at the beginning of the conflict in OIF and will be addressed by question two below.

### **Investigative Question 2 Results**

Did it change the shape of employment? The proposition for this investigative question being: The processes for which airlift is assigned is deliberate and structured to meet a balanced response time demanded by the users.

The simple answer to this question is yes. As the “fog and friction” of war set in on the campaign in OIF, shifting objectives caused some problems with the C-17A SOLL II force. The agreed upon objective the SOLL II crews had planned and trained for was no longer a priority. New objectives surfaced and the planning for these missions was started feverishly but the C-17A forces were quickly excluded because no approval had been given for emerging missions. The leadership of the 781<sup>st</sup> EAS worked through their chain of command to obtain approval.

This process was cumbersome and required an intelligence analysis be accomplished back at AMC for whatever objective TF 20 was considering. Even with the technological advances made in intelligence information sharing, the sheer distances

and security barriers between the theater and AMC headquarters caused a certain amount of delay in the approval process. This delay was damaging in two respects; late planning and weakening confidence by the user. As more missions came and went, the users became more reluctant to include the C-17A in the planning phase and the 781<sup>st</sup> planners became very discouraged.

As the 781<sup>st</sup> leadership worked through these issues, TF 20 forces were actively engaging the enemy. These forces may have been more lethal and effective in obtaining objectives had the C-17A been available to execute its capabilities earlier. When the C-17 SOLL II assets did get released by AMC to fly missions in support of TF 20 the results were outstanding. An example of this was the equipment airdropped by the C-17A giving coalition forces the ability to open an airfield in the western desert. This airfield was immediately used for direct action strikes against critical targets.

### **Investigative Question 3 Results**

Were the airlift objectives of the Combatant Commander met? The proposition for this investigative question being: No matter what the request or tasking, Air Mobility Command would not allow an airlift need to go unfilled for a mission with a very high priority.

Because the C-17A and its increasingly reliable and expanding capability allowed the commanders of these operations to bring war fighting power to the battle field in a new manner, the obvious answer to this question is yes! The researcher struggled with this question because of the difficulty in establishing a unit of analysis for measurement of the question word “met”. After action reports and articles on these evolutionary successes in airlift were used to interpret a qualitative “feel” for this answer.

During OAF, the ability to deploy the Patriot Battery forces, helicopters, and other light armored vehicles in support of those operations with a velocity and throughput in such an austere operating environment was unmatched. That operation can be singled out as the birth of direct delivery because of the nature of that conflict and the close proximity to the battle front that these airlifters operated.

In OEF, the ability of the CTF 58 commander, Gen Mattis, to employ a force in southern Afghanistan that cut off the escape route for fleeing Taliban members was due almost entirely to the SOLL II C-17A unit operating out of Thumrait. The capability of landing 100,000 pound cargo loads of heavy trucks and other fighting equipment was history in the making. The strategic advantage and operational flexibility allowed surgical strikes into the southern area of Khandahar.

The C-17A missions flown in support of TF 20 during OIF demonstrated the ability of the SOF to operate practically anywhere they choose. The airfield that they opened up with equipment airdropped from the C-17A allowed them to clear obstructions from the runway and taxiways. This capability allowed follow on forces to be landed on this former enemy airfield. The other operation unique to the C-17A was moving the M1A1 tanks within Iraq to give the commander a distinct firepower advantage in the west for strikes on the perimeter of Baghdad.

The literature review revealed how joint and Air Force doctrine, even if somewhat dated, requires interoperability to exploit combined capabilities and leverage our mutual strengths for greater success in operations. These operations highlight the true joint operating environment of the SOLL II forces. SOLL II because of its habitual training

with joint forces is best suited for tasking by the JFC when heavy airlift or outsized cargo is required by the commander to meet a tactical or operational objective.

The final chapter summarizes the research conducted and reports the findings of this paper. The analysis conducted in Chapter 4, according to case study methodology, combined with research throughout the literature review is tied together in the conclusion.

## Chapter 5 – Conclusions

### Summary of Findings

This analysis of recent operations employing C-17A Special Operations Aircrews was based on the overall research question: How well, and in what situations, has AMC satisfied the airlift requirements of high priority, “External Users” during the USGWOT?

The overarching question was subdivided into five questions:

1. Was the process of airlift request cumbersome?
2. Did it change the shape of employment?
3. Were the airlift objectives of the Combatant Commander met?
4. Would “Chopping” Special Operations C-17As and their aircrews to the theater commander; meet the Combatant Commander’s objectives?
5. How would designating a fleet of Special Operations C-17As affect the “air bridge” concept of mobility?

Of these five questions, three were answered and two were suggested as future research.

The answers to the first three questions report the findings of this paper.

Was the process of airlift request cumbersome? Cumbersome, yes; intricate and delicate, yes; impossible, no. Much depended on the personality of the operation commander and the leadership’s faith in the C-17A SOLL II crew force and their capabilities.

Did it change the shape of employment? Perhaps! There are some missions that may have been achievable with favorable results had the C-17As been allowed to

participate earlier. The bottom line is the crews did an outstanding job coordinating with the controlling agency, AMC and coordinating lift requirements of the users in all cases.

Were the airlift objectives of the Combatant Commander met? Absolutely!

When Task Force Commanders make a statement like, “best flying, in worst conditions I’ve seen”, there is a tremendous amount of respect that goes to the enablers of the operation.

The success enjoyed by the C-17A community and specifically the SOLL II operators during these three operations chosen for research answer the overall question. The airlift objectives of the combatant commanders were met in each of the situations. The question left to answer is: could there have been greater support given to these commanders if the C-17A had been released OPCON in the theater instead of remaining controlled by AMC. The answer to this question as seen by the research herein is not easily obtained. The very nature of the threat the war fighting commanders of today are facing is distinct and emerging from the threat doctrine it is based upon.

The governing doctrine does however spell out the lateral flexibility given to commanders when a need for deviation is recognized. The transformation in airlift has been so fast and furious it may not be realistic to expect doctrine to keep up. The very nature of doctrine, authoritative not directive, should and has allowed for success. Emerging threats since the start of the USGWOT have been met with emerging capability and doctrine is attempting to harness this change. The vision of the senior leaders will shape the forces to accept this transformation and force changes within the operational control and tactical control levels. Current and revisionist doctrine professes adaptation of new processes, joint war fighting, and complete commitment to support the JFC.

Agile airlift and airlift assignment is critical to meet these emerging threats with the full force of a joint and combined fighting force. The immediate challenge faced by senior leaders which helps justify a reluctance to transfer control between commanders is the overriding issue of responsibility. The C-17A as a weapon system is a global asset that transcends theaters and AORs. This ability to cross borders is not easily grasped and is in stark contrast to theater assigned assets.

There probably is a better way to do things but until doctrine changes or the transition of forces between commanders becomes more fluid, what happened in the three operations studied met the challenge. AMC's control of assets did not preclude success and the support given to the combatant commanders was unwavering; but the extent to which "centralized control and decentralized execution" was utilized hampered potential operations and possible greater success.

A possible solution, when and if the combatant commanders choose to accept responsibility, is to grant time limited or objective based tactical control to the Joint Force Commander. When the JFC's objectives for the SOLL II C-17As have been met, the assets and crews would be returned to AMC. This would eliminate the fear of either misuse or non-use of these critical global assets. A memorandum of agreement by and between the AMC/CC and the JFC could outline tasking procedures and responsibilities.

## **Areas for Future Research**

Investigative question (4) Would "Chopping" Special Operations C-17As and their aircrews to the theater commander; meet the Combatant Commander's objectives?

Investigative question (5) How would designating a fleet of Special Operations C-17As affect the “air bridge” concept of mobility?

Additionally these research areas were beyond the scope of this document but would contribute to the understanding of this enormous topic.

(1) Force module employment of US Army assets and the airlift requirement it will generate. Whether or not the current MTM/D figure is accurate?

(2) Is Air Force Special Operations Command interested in buying the C-17A or some “M” version of it? With the development of “directed energy” weapons, will there be a need for a platform capable of flying higher and farther than the current AC-130 Gunship? Could the capabilities be merged to save money by buying one platform for multiple uses?

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